

REMARKS

Review and reconsideration on the merits are requested.

Claim 2 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner considered that the Y group cannot contain both -COOH and -OH simultaneously.

Applicants respond as follows.

The Y group is described at page 9 of the specification as having a pKa value of not more than 11, where Y represents one or more hydrophilic groups having an acidic OH group including -COOH, -OH and other groups. Claim 1 does not preclude a composition comprising a fluorine-containing polymer (A) including some units derived from a fluorine-containing ethylenic monomer having the hydrophilic group -COOH and other units derived from a fluorine-containing ethylenic monomer having a hydrophilic group -OH (as claimed in claim 2).

For clarification, claim 1 has been amended to recite "...said fluorine-containing polymer (A) has [a structure unit] one or more structural units derived from a fluorine-containing ethylenic monomer having the hydrophilic group Y and is characterized in that: (i) the hydrophilic group Y [contains -COOH having] has a pKa value of not more than 11 and includes -COOH." Also, for clarification, claim 2 has been amended to recite "... further [contains] includes -OH [having a pKa value of not more than 11]."

It is respectfully submitted that the claims as amended fully comply with 35 U.S.C. § 112, and withdrawal of the foregoing rejection is respectfully requested.

Claims 1, 3-4, 11-13, 15-18, 21 and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 6,057,080 to Brunsvold et al in view of US 2003/0152864 A1 to Araki et al.

Araki et al was cited as disclosing fluorinated polymers for resist compositions, including a repeating unit of formula I(2)-2 within the scope of formula (2-1) of present claim 1 in an amount of 1-99 mol% and as exemplified in EXAMPLE 26 at page 108. The reason for rejection was that it would have been obvious to use the fluorinated polymer of Araki et al in the anti-reflective film of Brunsvold et al because (i) Araki et al teaches that the fluorinated polymer disclosed therein may be used in reflection-reducing films (page 91, [1324]); and (ii) Araki et al is said to teach that the fluorinated polymer has high transparency, a low reflective index and an acid reactive functional group known to improve solubility in alkali developers.

In response, claims 1 and 13 have been amended to further characterize the structural units N1 and N3, respectively, so as to exclude the structural unit derived from vinylidene fluoride (VdF) used in EXAMPLE 26 of Araki et al. Thus, even if Araki et al is combined with Brunsvold et al, the resulting fluorine-containing polymer is outside the scope of the fluorine-containing polymer (A) or (A1) as defined in claims 1 and 13, respectively. That is, there is no combination of Araki et al and Brunsvold et al which could achieve the present invention.

In view of the amendment to the claims and the foregoing remarks, it is respectfully submitted that claims 1-4, 11-13, 15-18 and 21 are patentable over the cited prior art, and withdrawal of the foregoing rejection under 35 U.S.C. § 103(a) is respectfully requested.

Withdrawal of all rejections and allowance of claims 1-4, 11-13, 15-18 and 21 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

AMENDMENT UNDER 37 C.F.R. § 1.111
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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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